Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A truss span, comprising:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel ~~cords~~ chords provide a face of the truss span such that the at least three chords provide at least three faces;

a web connecting two adjacent parallel chords corresponding to at least two of the at least three faces to provide the truss span with at least two webbed faces; and

a first structural end bracket and a second structural end bracket connecting two adjacent parallel chords corresponding to at least one of the at least three faces without contacting any other of the at least three chords to provide the truss span with at least one open face, the first end bracket connecting a first end of the two adjacent parallel chords and the second end bracket connecting a second end of the two adjacent parallel chords to provide an open face area between the first and second structural end brackets;

wherein the truss span has a tapered profile such that another identical truss span is capable of nesting within the open face area between the first and second structural end brackets.

2. (Original) The truss span of claim 1, wherein each of the at least three chords includes a cylindrical chord.

3. (Original) The truss span of claim 2, wherein:

each cylindrical chord has a cylindrical wall, a first end and a second end, each end of the cylindrical chord having an end plug with an aperture;

a first access opening and a second access opening through the cylindrical wall, the first access opening being proximate to the first end of the cylindrical chord and the second access opening being proximate to the second end of the cylindrical chord,

wherein the apertures and the access openings are sized to allow fasteners to be inserted into the access openings and through the apertures for connecting the chords from another truss span.

4. (Original) The truss span of claim 1, wherein the web formed between two adjacent parallel chords includes at least one elongated member providing multiple connection points between the two adjacent parallel chords.

5. (Original) The truss span of claim 1, wherein the web includes a plurality of web plates, each web plate connecting the two adjacent parallel chords.

6. (Original) The truss span of claim 1, wherein:

the first structural end bracket has two end portions and a middle portion between the two end portions, and further has an inside edge and outside edge, the outside edge being approximately flush with the first end of the two adjacent parallel chords corresponding to the open face of the truss span, and the inside edge having a shape such that the middle portion has a width that is smaller than a width of the two end portions; and

the second structural end bracket has two end portions and a middle portion between the two end portions, and further has an inside edge and outside edge, the outside edge being approximately flush with the second end of the two adjacent parallel chords corresponding to the open face of the truss span, and the inside edge having a shape such that the middle portion has a width that is smaller than a width of the two end portions.

7. (Original) The truss span of claim 6, wherein the at least two webbed faces include an unobstructed region at each end of the truss span, the unobstructed region extending a distance from the end of the truss span that is at least twice the width of the middle portion of the first and second end brackets.

8. (Original) The truss span of claim 1, wherein:

the at least three parallel chords includes three parallel chords of approximately equal length, including a first chord, a second chord and a third chord, each of the chords having a first end and a second end;

the web includes a first web connecting the first and second chords and a second web connecting the second and third chords; and

a first end bracket connecting the first end of the first chord to the first end of the third chord, and a second end bracket connecting the second end of the first chord to the second end of the third chord.

9. (Original) The truss of claim 8, wherein the first end bracket has one end approximately flush with the first end of the first and third chords, and the second bracket has one end approximately flush with the second end of the first and third chords, and wherein the first bracket and the second bracket have generally concave-shaped inside ends.

10. (Currently Amended) A system, comprising:

a plurality of truss spans, each truss span including:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel ~~cords~~ chords form a face such that the at least three chords form at least three faces;

a web connecting two adjacent parallel chords for at least two of the at least three faces; and

at least one of the three faces having two adjacent parallel chords connected by two structural end brackets without the two structural end brackets contacting any other of the at least three chords; and

the plurality of truss spans having a tapered profile and a stacked configuration where a first truss span nests inside of a second truss span when the first truss span is inserted between the two structural end brackets of the second truss span.

11. (Original) The system of claim 10, further comprising a hub adapted to connect at least two truss spans at a predetermined angle in an assembled configuration, wherein the at least two truss spans radially extend from the hub.

12. (Original) The system of claim 10, further comprising a hub adapted to connect at least two truss spans in an assembled configuration, wherein a first one of the at least two truss spans extends in a generally vertical direction from the hub and a second one of the at least two truss spans extends in a generally horizontal direction from the hub.

13. (Original) The system of claim 12, wherein the hub is adapted to connect a third truss span in a generally horizontal direction from the hub to form a predetermined angle with the second one of the at least two truss spans in the assembled configuration.

14. (Original) The system of claim 10, wherein the plurality of truss spans have an assembled configuration where the first truss span is connected in-line to the second truss span.

15. (Original) The system of claim 10, wherein each of the chords includes a cylindrically-shaped tube, wherein the first truss span is adapted to be connected to the second truss span by joint systems for connecting chords from one truss span to chords from another truss span.

16. (Original) The system of claim 15, wherein:
each tube has a cylindrical wall; and
each joint system includes:
a first access opening in the cylindrical wall proximate to a first end of a first tube and a second access opening in the cylindrical wall proximate to a second end of a second tube;

a first end plug with an aperture located in the first end of the first tube and a second end plug with an aperture located in the second end of the second tube; and

a fastener extending through the apertures of the first and second end plugs.

17. (Original) The system of claim 10, further comprising removable bracing adapted to further support the two adjacent parallel chords connected by two structural end brackets.

18. (Original) The system of claim 10, wherein each of the structural end brackets has two end areas of at least a first width attached to the two adjacent parallel chords and further has a middle area of a thinner width.

19. (Original) The system of claim 18, wherein the web is separated from a first end and a second end of the chords by a distance equal or greater to twice the width of the middle area of the structural end brackets.

20. (Original) The system of claim 10, further comprising a plurality of connection members, each connection member including a plurality of members, each connection member including a tapered end adapted to connect to the hub such that a number of connection members are able to be attached to a single hub to radially extend from the hub in a single plane.

21. (Original) The system of claim 20, wherein the hub includes a cylindrical hub, each connection member including at least one cradle having a first tab and a second tab to contact the cylindrical hub, the first and second tabs extending away from the connection member to enhance stability of the connection member against the hub, the first tab being biased in a upward direction and the second tab being biased in a downward direction such that tabs from adjacent connection members do not interfere with each other at narrow angles.

22. (Original) The system of claim 10, wherein the hub includes a cylindrical wall, and a set of pre-formed holes for use to fasten connection members to the hub.

23. (Original) The system of claim 22, wherein the set of pre-formed holes includes a set of holes equally distributed around a circumference of the hub to fasten four connection members, each connection member being separated from another connection member by approximately 90°.

24. (Original) The system of claim 23, wherein the hub further includes a set of pre-formed slots for use to fasten connection members to the hub, the slots being positioned between the holes.

25. (Original) The system of claim 24, wherein the set of pre-formed holes and the set of pre-formed slots are positioned and sized to allow a connection member to be connected to the hub within a plane with another connection member and at an adjustable angle.

26. (Original) In a truss system having a plurality of truss spans, a plurality of generally cylindrically-shaped hubs, and a plurality of connection members, a method for forming a truss assembly, comprising:

attaching one or more connection members to one of the hubs so that the one or more connection members radially extend away from the hub;

attaching a first truss span to each of the one or more connection members; and

attaching a second truss span in-line with at least one of the first truss spans.

27. (Original) The method of claim 26, wherein attaching one or more connection members includes attaching multiple connection members to the hub in a plane, wherein the connection members have tapered ends and adjacent members form an acute angle.

28. (Original) The method of claim 26, further comprising attaching an end of a truss span to a bottom end of the hub with one or more connection members extending radially away from the hub.

29. (Original) A joint system for joining truss spans having truss chords where at least a portion of the truss chords are hollow, comprising:

a first access opening in a first hollow portion proximate to a first end of a first truss chord and a second access opening in a second hollow portion proximate to a second end of a second truss chord; and

a first end plug with an aperture at the first end of the first truss chord and a second end plug with an aperture at the second end of the second truss chord; and

a fastener extending through the aperture of the first end plug and into the aperture of the second end plug.

30. (Original) The joint system of claim 29, wherein:

the fastener includes a bolt and a nut;

the bolt is capable of being inserted into the first access opening and extend through the apertures of the first and second end plugs;

the nut is capable of being inserted into the second access opening; and

the bolt and the nut are capable of being tightened by inserting a wrench through at least one of the first and second access openings.

31. (Original) The joint system of claim 30, wherein the bolt includes a drive head and a flange, wherein the drive head has a diameter smaller than a diameter of the flange.

32. (New) A truss span, comprising:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel chords provide a face of the truss span such that the at least three chords provide at least three faces;

a web connecting two adjacent parallel chords corresponding to at least two of the at least three faces to provide the truss span with at least two webbed faces; and

a first structural end bracket and a second structural end bracket connecting two adjacent parallel chords corresponding to at least one of the at least three faces to provide the truss span with at least one open face, the first end bracket connecting a first end of the two adjacent parallel chords and the second end bracket connecting a second end of the two adjacent parallel chords to provide an open face area between the first and second structural end brackets;

wherein the truss span has a tapered profile such that another identical truss span is capable of nesting within the open face area between the first and second structural end brackets,

wherein each of the at least three chords includes a cylindrical chord, each cylindrical chord has a cylindrical wall, a first end and a second end, each end of the cylindrical chord having an end plug with an aperture, each cylindrical chord further having a first access opening and a second access opening through the cylindrical wall, the first access opening being proximate to the first end of the cylindrical chord and the second access opening being proximate to the second end of the cylindrical chord,

wherein the apertures and the access openings are sized to allow fasteners to be inserted into the access openings and through the apertures for connecting the chords from another truss span.

33. (New) A system, comprising:

a plurality of truss spans, each truss span including:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel chords form a face such that the at least three chords form at least three faces;

a web connecting two adjacent parallel chords for at least two of the at least three faces; and

at least one of the three faces having two adjacent parallel chords connected by two structural end brackets; and

the plurality of truss spans having a tapered profile and a stacked configuration where a first truss span nests inside of a second truss span when the first truss span is inserted between the two structural end brackets of the second truss span,

wherein each of the chords includes a cylindrically-shaped tube, wherein the first truss span is adapted to be connected to the second truss span by joint systems for connecting chords from one truss span to chords from another truss span, wherein

each tube has a cylindrical wall; and

each joint system includes:

a first access opening in the cylindrical wall proximate to a first end of a first tube and a second access opening in the cylindrical wall proximate to a second end of a second tube;

a first end plug with an aperture located in the first end of the first tube and a second end plug with an aperture located in the second end of the second tube; and

a fastener extending through the apertures of the first and second end plugs.

34. (New) A system, comprising:

a plurality of truss spans, each truss span including:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel chords form a face such that the at least three chords form at least three faces;

a web connecting two adjacent parallel chords for at least two of the at least three faces; and

at least one of the three faces having two adjacent parallel chords connected by two structural end brackets; and

the plurality of truss spans having a tapered profile and a stacked configuration where a first truss span nests inside of a second truss span when the first truss span is inserted between the two structural end brackets of the second truss span, and

a plurality of connection members, each connection member including a plurality of members, each connection member including a tapered end adapted to connect to the hub such that a number of connection members are able to be attached to a single hub to radially extend from the hub in a single plane,

wherein the hub includes a cylindrical hub, each connection member including at least one cradle having a first tab and a second tab to contact the cylindrical hub, the first and second tabs extending away from the connection member to enhance stability of the connection member against the hub, the first tab being biased in a upward direction and the second tab being biased in a downward direction such that tabs from adjacent connection members do not interfere with each other at narrow angles.

35. (New) A system, comprising:

a plurality of truss spans, each truss span including:

at least three chords in a generally parallel orientation with respect to each other, wherein adjacent parallel chords form a face such that the at least three chords form at least three faces;

a web connecting two adjacent parallel chords for at least two of the at least three faces without the two structural end brackets contacting any other of the at lease three chords; and

at least one of the three faces having two adjacent parallel chords connected by two structural end brackets; and

the plurality of truss spans having a tapered profile and a stacked configuration where a first truss span nests inside of a second truss span when the first truss span is inserted between the two structural end brackets of the second truss span, and

wherein the hub includes a cylindrical wall, and a set of pre-formed holes for use to fasten connection members to the hub,

wherein the set of pre-formed holes includes a set of holes equally distributed around a circumference of the hub to fasten four connection members, each connection member being separated from another connection member by approximately 90°,

wherein the hub further includes a set of pre-formed slots for use to fasten connection members to the hub, the slots being positioned between the holes.

36. (New) The system of claim 35, wherein the set of pre-formed holes and the set of pre-formed slots are positioned and sized to allow a connection member to be connected to the hub within a plane with another connection member and at an adjustable angle.